ABSTRACT

Along with the growth of the need for people to communicate, then the technology to communicate that formerly still use ordinary telephone wires also developed really fast.Wireless communication is one of a communication system that the ablest to meet the needs of current human beings because a wireless communication allows us to be able to communicate without having to be limited by the distance.

So, this final project will be designed and realized the microstrip fractal-bowtie antenna that works at the frequency of dual band that is at the frequency of 900mhz and 1800mhz so that it can support for wireless communication in GSM.The making of the antenna firstly done by the mathematical calculation and after that, it will be simulated in CST software and after obtaining a precise specification then the antenna will be designed after the antenna finished being designed, the measurement will be directed straight to the antenna.

Finally in this final project got antenna able to work in two frequency that is 900 MHz and 1800 MHz. With a return loss below -10, the omnidirectional radiation pattern, and a larger bandwidth of around 40 MHz and 100 MHz, the polarization produced by this antenna is also linear with dimensions or antenna size about 6 cm x 10 cm.

***Key Word** : Microstrip antenna,bowtie,fractal,GSM.*